

Feel free to contact your local fire department at any time at the following location and number:



The Department of Fire Services, Office of the State Fire Marshal is located at:

P.O. Box 1025 – State Road  
Stow, MA 01775  
(978) 567-3300

and on the web at: [www.state.ma.us/dfs](http://www.state.ma.us/dfs)

# FACTS

## for Massachusetts Property Owners About Blasting



*The Department of Fire Services  
Office of the State Fire Marshal*

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## BLASTING FACTS

- IME\* reports that in 2000 over 8 million pounds of commercial explosives were sold for use in Massachusetts.
- Explosives have been used directly or indirectly in almost every part of our daily lives. Car, trucks, roads, bridges, homes, and office buildings are all built with products that had their origins with explosives. Mining and construction are the two most common uses of explosives.
- Even a product as delicate as baby powder has its origin with explosives!

*\*IME – Institute of Makers of Explosives*

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## BLASTING REGULATIONS

Commercial explosives and the blasting industry are regulated by a number of state and federal agencies. In Massachusetts 527 CMR 13 is the primary regulation that applies to explosives licensing, permitting, storage, sales, use, transportation, and manufacture. 527 CMR 13 is administered through the Department of Fire Services, Office of the State Fire Marshal.

Federal agencies that regulate explosives:

- Alcohol, Tobacco, and Firearms (ATF) – sales and storage
- Department of Transportation (DOT) – transportation
- Occupational Safety and Health Administration (OSHA) – construction use and handling
- Mining Safety and Health Administration (MSHA) – mining use and handling

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## USEFUL NUMBERS



Department of Fire Services  
P.O. Box – State Road, Stow, MA 01775  
(978) 567-3100

Western Massachusetts Office  
P.O. Box 389 – One Prince Street, Northampton, MA 01060-0389  
(413) 587-3181, Fax (413) 587-9819

Executive Office  
Main Telephone: (978) 567-3110, Fax: (978) 567-3121  
Office of the State and Deputy State Fire Marshal, General Counsel, and Public Information

Hazardous Materials Response  
Main Telephone: (978) 567-3150, Fax: (978) 567-3155  
Address hazardous materials incidents with a focus on public safety, the environment, and the health and safety of firefighters.

Massachusetts Firefighting Academy  
Main Telephone: (978) 567-3200, Fax: (978) 567-3229  
Provides firefighting training for cities, towns, and fire districts, as well as appropriate public and private sector organizations.

Office of the State Fire Marshal  
Main Telephone: (978) 567-3300, Fax: (978) 567-3199

- Fire Data & Public Education Unit, (978) 567-3380  
This unit maintains the Massachusetts Fire Incident Reporting System, the Massachusetts Burn Injury Reporting System, and the Property Insurance Loss Register. It coordinates fire safety education, including the S.A.F.E. Program.
- Fire & Explosion Investigation Section  
Telephone: (978) 567-3310, Fax: (978) 567-3119  
Arson Hotline: (800) 682-9229  
Hazardous Device Section: (978) 567-3365
- Code Compliance & Enforcement Unit  
Telephone: (978) 567- 3375, Fax: (978) 567 - 3199
- Technical Services Unit  
Telephone: (978) 567-3300, Fax: (978) 567-3199

**Will you hear or feel the blast?**

Yes, you could, depending how close you are to the blasting site. Humans are fairly sensitive to noise and sound. What you may feel does not necessarily mean that damage is occurring. Let the blasting company know if you are being startled or if you have other concerns about what is taking place.

**What if I am sure that blasting damage has occurred?**

If you feel that damage may have occurred to your property, you can fill out a Blasting Damage Complaint Form. This form is available from the local fire department. Once filled out and returned, the blasting company will be required to submit to the fire department the records for the blasts believed to have caused the damage. Those records will be reviewed by both the fire department and the Office of the State Fire Marshal for any violations of the regulations. Additionally, the blasting company or its insurance company is required to respond to the claimant and to investigate the claim.

**What precautions can be taken before blasting starts?**

If offered a preblast survey, accept the offer. The survey is simply an inventory of existing conditions of the property. It is also an opportunity for the property owner to ask questions and the blasting company to perform some public relations. If you have any concerns or questions, let them be known. The blasting company should be ready and willing to answer questions or address any additional concerns you may have.

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# MASSACHUSETTS REGULATIONS

**527 CMR 13 EXPLOSIVES****KEY PARTS OF THE REGULATION**

On the web at: [www.state.ma.us/dfs/cmr/cmridx.htm](http://www.state.ma.us/dfs/cmr/cmridx.htm)

**CMR 13.04 Licenses, Permits, Certificates**

- Certificate of Competency
- Explosives Users Certificate
- Use and Handling Permit
- Sale of Explosive Material

**CMR 13.05 Storage****CMR 13.06 Transportation****CMR 13.09 Use of Explosive Materials (Blasting)**

- Blast Analysis
- Blast Design Plan
- Allowable Limits of Effects of Blasting
- Preblast Inspection Surveys
- Blasting Damage Complaint

**CMR 13.14 Pre/Post Blast Inspection Waiver Form****CMR 13.15 Blasting Damage Complaint Form****IMPORTANT PARTS OF 527 CMR 13 FOR THE HOMEOWNER TO BE AWARE OF:****13.09 (1)(k) Blast Analysis**

This is where the blasting company should be considering the effects of blasting on adjacent properties.

**13.09 (1)(I) Blast Design Plan**

The blast design plan outlines the details of how the initial blasts will be designed and all the necessary safety precautions to be taken.



### **13.09 (10) Preblast Inspection Surveys**

When blasting takes place within 250 feet of a property not owned or controlled by the project, a survey has to be offered to the property owner at no cost to the owner.

### **13.09 (1)(m) Warnings**

The blaster, when ready to fire the blast, must sound warnings.

### **13.09 (9) Allowable Limits of Effects of Blasting**

These are the limits that are set for vibration and noise that result from a blast. This section also contains the requirements for use of a seismograph.

### **13.09 (12) Blasting Damage Complaint**

Should the property owner feel that damage has occurred as a result of blasting, a damage complaint form can be filed with the fire department.

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## **A FEW THINGS TO REMEMBER**



If a blasting project is planned near your property, take a close look at your home or business. You may be surprised at how many cracks in walls, floors, and ceilings already exist just from seasonal changes in humidity, age, and normal wear and tear. Most property owners don't notice these until after the blasting has started and mistake them for blasting damage.



The limits set for blasting noise and vibration are conservative and are below the threshold of where damage is known to occur.

The limits set in Section 13.09 are the result of years of study and research by universities and the Federal Government. The USBM\* RI 8507 Report is the primary source for establishment noise and vibration damage levels.

*\*USBM – United States Bureau of Mines*

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## **WHO DO YOU CONTACT?**

**In Massachusetts there are two places to go for blasting help.**

The local fire department is the agency who issues the actual Permit to Blast. That permit will be issued only if all the correct planning has taken place and all other conditions of 527 CMR 13 have been met.

Through the Department of Fire Services, the Office of the State Fire Marshal issues Blasting Certificates of Competency and Explosives Users Certificates to blasters and blasting companies. A local fire department will not issue a blasting permit unless these documents are presented. These documents represent that the blaster is considered competent to conduct blasting operations, and that his company has shown evidence of bonding and required insurance respectively.

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## **OTHER BLASTING INFORMATION**

### **How is blasting noise and vibration measured?**

A seismograph is used to measure both of these effects of blasting. Seismographs are set up next to the closest structure to the blast site. These machines record the ground vibration and noise generated by the blast. This information is used to determine if the blast has exceeded the limits set in the regulations.

### **What records does the blaster have to keep?**

The blaster is required to keep detailed records of each blast. These records contain the size, time, and location of the blast, the amount of explosives used, and the results of the seismograph monitoring.